



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,977	02/11/2002	Andreas Weber	WEI0036	3028

7590

06/06/2003

John F Hoffman  
Baker & Daniels  
111 East Wayne Street  
Suite 800  
Fort Wayne, IN 46802

EXAMINER

ROBERTSON, JEFFREY

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

14

<b>Office Action Summary</b>	<b>Application No.</b> 10/018,977	<b>Applicant(s)</b> WEBER ET AL.	
	<b>Examiner</b> Jeffrey B. Robertson	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 28-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-56 is/are rejected.
- 7) ☒ Claim(s) 28-56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement:

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 4/18/00. It is noted, however, that there is no copy of the foreign priority document present in the application file.

### ***Claim Objections***

2. Claims 28-56 are objected to because of the following informalities:

For claims 28, 32-35, 38, and 39 the examiner is uncertain how to interpret the expression "of the order of" when referring to the numerical ranges set forth in the claims. What is the meaning of this expression? Are the stresses and thickness set forth within this range or not?

In claim 37, line 1, "if" should be changed to "is". Also for claim 37, applicant sets forth that the base body is "designed" as flat glass, bent flat glass, or as container glass. What is the nature of the glass body of claim 37? Is it still in its designed shape, or has the structure of the body changed?

For claim 43, the recitation of "a first epoxy layer is applied to the base body by centrifuging an epoxy resin" is unclear. The centrifuging of the epoxy resin does not indicate its application to the base body. The examiner suggests the addition of the language "on the base body" after epoxy resin. Appropriate correction is required.

Art Unit: 1712

3. Claims 51-56 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. For claim 51, the claim depends from itself. Also claims 52-56 depend from claim 51. For examination purposes, the examiner has treated claims 51-56 as depending from claim 50.

***Specification***

4. The disclosure is objected to because of the following informalities: applicant has not provided sufficient enablement to practice the claimed invention. The examiner has made the following findings based on the enumerated factors:

- (A) The breadth of the claims;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

(A) The breadth of the claims:

The breadth of the claims is such that the recitation of silicon resin in claim 28, would also include the silicon elastomer in claim 32. Since different properties are recited in the two claims, it is not known how the two can be differentiated based on applicant's disclosure. It is also not known how both compressive and tensile stress can be possessed by polymers that fall under the same general definition of silicon

Art Unit: 1712

resin. The claims in general are very broad in terms of recitation of polymers such as "silicon resin", "platinum-catalysed addition-cross-linking silicon elastomer", "epoxy resin", "mixture of polyacrylates and polyepoxy", and "polyurethane".

(F) The amount of direction provided by the inventor:

Applicant sets forth in the second full paragraph on page 3 that the tensile and compressive stresses are adjusted through the selection of an appropriate polymer with respect to molecular weight, degree of hydrolysis, purity, cross-linkable functional groups and by subsequent treatment. Applicant does not provide any guidance on how to select the polymers within the compressive and tensile stresses set forth in the claims, particularly with respect to the addition cross-linking systems.

(G) The existence of working examples:

Although there are working examples, none of these examples with respect to the silicon resins, polyurethanes, and epoxy/polyacrylate mixtures set forth compressive or tensile stress measurements. On pages 13-14, in 17., applicant has not disclosed the specific components that are used in the example in a manner sufficient to enable one of ordinary skill in the art to practice the embodiment. The term "vinyl siloxane" encompasses many possibilities, as does the term "crosslinker" and "platinum catalyst". These terms are not of sufficient specificity to indicate to one of ordinary skill in the art what materials were used to produce the coating set forth in the example. For example, what molecular weight ranges would be appropriate? What degree of hydrolysis or purity would be appropriate? What is the identity of the crosslinker? How many vinyl

Art Unit: 1712

groups are present on the vinyl siloxane? What is the molecular weight of the vinyl siloxane? Are there any limits on the type of platinum catalyst that is used?

(H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure:

In light of the problems set forth above, one of ordinary skill in the art would have to undergo undue experimentation to obtain the coating set forth in 17. Example 18 on page 14 sets forth tensile stresses of acrylate and epoxy lacquer systems, but does not set forth the identity of the materials used. This would require undue experimentation for one of ordinary skill in the art.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 28-56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As set forth above in paragraph 4, applicant has not described how to generate layers on a glass body from a silicon resin, platinum catalyzed addition crosslinking silicon elastomer, epoxy resins, mixtures of polyacrylates and polyepoxy, and

Art Unit: 1712

polyurethanes that would fulfill the compressive and tensile stresses required by the claim. The specification does not indicate how the components of the respective polymers are to be chosen to fulfill the limitations of the claims.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 28, 37, 38, 39, 48, 50, and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Tracy et al. (U.S. Patent No. 4,273,828).

For claim 28, in column 2, lines 15-22, Tracy teaches that a polymeric silicon nitride film is deposited on glass imparting compressive strength. In columns 5 and 6, Chart I, Tracy teaches that the compressive strength of the coating films in Examples 1-4, 6, and 7 are all within applicant's range. For example, a compressive stress of  $6.9 \times 10^9$  dynes/cm<sup>2</sup> (Example 4) equals 690 M Pa and a compressive stress of  $1.6 \times 10^9$  dynes/cm<sup>2</sup> (Example 7) equals 160 M Pa.

For claims 37 and 48, in column 6, line 12, Tracy teaches that glass discs are used as the substrate. For claims 38 and 39, in column 5, lines 66-67, Tracy teaches that the glass substrate is 750,000 angstroms thick (75 micrometers). For claims 50 and 53, in column 5, lines 25-28, Tracy teaches that the glass treatment imparts stable characteristics with respect to moisture, thus acting as a diffusion barrier.

Art Unit: 1712

9. Claims 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Levy et al. (U.S. Patent No. 5,789,024).

For claim 28, in column 22, lines 58-67, teaches that a silicon containing resin is deposited on a glass substrate and has a compressive stress of 210 Mpa.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Marsoner et al. (U.S. Patent No. 4,657,736) teaches a silicone elastomer coating on glass. Kolek (U.S. Patent No. 3,769,126) and McCoy et al. (U.S. Patent No. 4,656,084) teach the use of an epoxy resin as a size composition to strengthen glass fibers. Hoppe et al. (U.S. Patent No. 5,071,892) teaches polyurethane lacquer coatings on glass substrates. Blum et al. (U.S. Patent No. 5,162,136) teaches the formation of ceramic coatings on glass substrates from polysiloxanes. Yoshinaga et al. (U.S. Patent No. 5,475,515) teaches the coating of glass substrates using polyacrylates and epoxy resins. Lee (U.S. Patent No. 5,009,920), Mahoney (U.S. Patent No. 5,521,351), Otto et al. (U.S. Patent No. 5,643,638), and Lopata et al. (U.S. Patent No. 5,904,952) teach the deposition of silicon containing coatings on glass substrates through plasma. Levene et al. (U.S. Patent No. 3,853,673) and Carson et al. (U.S. Patent No. 6,013,333) teach strengthening of glass substrates using silicon coatings. Venkatramen et al. (U.S. Patent No. 6,083,313) teaches silicon containing coatings of compressive stresses of from 90-400 MPa on plastic substrates.




Art Unit: 1712

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Jeffrey B. Robertson  
Examiner  
Art Unit 1712

JBR  
June 2, 2003